

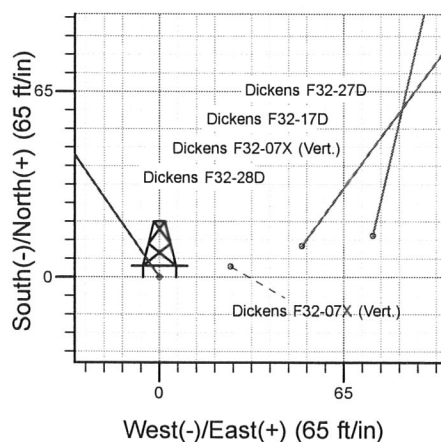
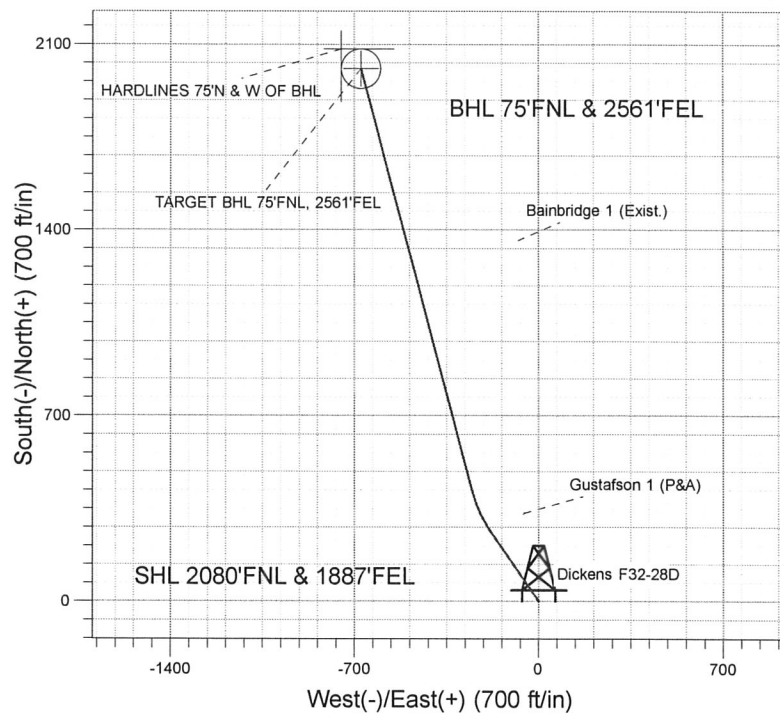
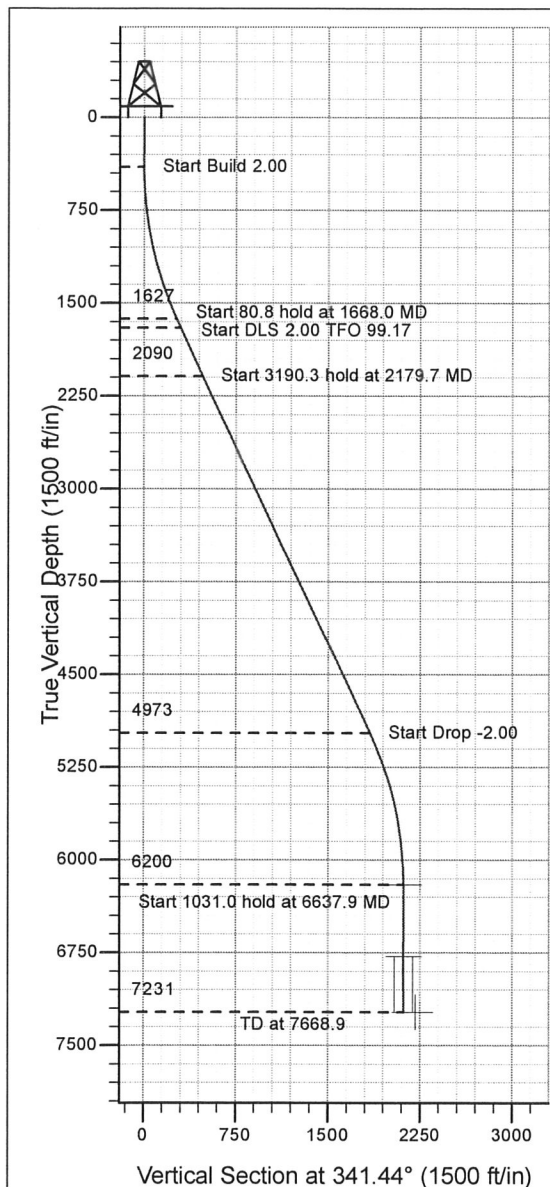
ENSIGN

Directional

Well Name: Dickens F32-28D

Surface Location: Dickens F32-27D Pad Sec.32-T5N-R65W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4668.0
 +N/-S+E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1374071.53 3227228.62 40° 21' 26.496 N 104° 41' 4.668 W
 Original Well Elev WELL @ 4681.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



Dickens F32-27D Pad Sec.32-T5N-R65W
 Dickens F32-28D
 Noble Dickens F32-28D Plan #1 (12-29-09)
 14:34, December 30 2009



Azimuths to True North
 Magnetic North: 8.98°

Magnetic Field
 Strength: 53292.2snT
 Dip Angle: 67.09°
 Date: 12/29/2009
 Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 75'FNL, 2561'FEL	6200.0	2007.5	-674.0	40° 21' 46.333 N	104° 41' 13.375 W	Point
TARGET CIRCLE 75'FNL, 2561'FEL	6781.0	2007.5	-674.0	40° 21' 46.333 N	104° 41' 13.375 W	Circle (Radius: 75.0)
HARDLINES 75'N & W OF BHL	7231.0	2082.5	-749.0	40° 21' 47.074 N	104° 41' 14.344 W	Polygon

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	1668.0	25.36	325.00	1627.0	226.1	-158.3	2.00	325.00	264.8	
4	1748.8	25.36	325.00	1700.0	254.5	-178.2	0.00	0.00	298.0	
5	2179.7	25.36	345.21	2090.2	419.6	-254.8	2.00	99.17	478.9	
6	5370.1	25.36	345.21	4973.1	1740.6	-603.6	0.00	0.00	1842.2	
7	6637.9	0.00	344.69	6200.0	2007.5	-674.0	2.00	180.00	2117.6	TARGET BHL 75'FNL, 2561'FEL
8	7668.9	0.00	344.69	7231.0	2007.5	-674.0	0.00	344.69	2117.6	

ENSIGN

Directional

**NOBLE ENERGY INC WELD
COUNTY CO**

SEC.32-T5N-R65W

Dickens F32-27D Pad Sec.32-T5N-R65W

Dickens F32-28D

Wellbore #1

Plan: Noble Dickens F32-28D Plan #1 (12-29-09)

Standard Planning Report

30 December, 2009



Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.32-T5N-R65W
Site: Dickens F32-27D Pad Sec.32-T5N-R65W
Well: Dickens F32-28D
Wellbore: Wellbore #1
Design: Noble Dickens F32-28D Plan #1 (12-29-09)

Local Co-ordinate Reference: Well Dickens F32-28D
TVD Reference: WELL @ 4681.0ft (Original Well Elev)
MD Reference: WELL @ 4681.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Project SEC.32-T5N-R65W, Weld County, Colorado

Map System: US State Plane 1983
Geo Datum: North American Datum 1983
Map Zone: Colorado Northern Zone

System Datum: Mean Sea Level
 Using Well Reference Point
 Using geodetic scale factor

Site Dickens F32-27D Pad Sec.32-T5N-R65W

Site Position: Northing: 1,374,086.80 ft Latitude: 40° 21' 26.640 N
From: Lat/Long Easting: 3,227,303.73 ft Longitude: 104° 41' 3.696 W
Position Uncertainty: 0.0 ft Slot Radius: " Grid Convergence: 0.53 °

Well Dickens F32-28D

Well Position +N/-S -14.6 ft Northing: 1,374,071.53 ft Latitude: 40° 21' 26.496 N
 +E/-W -75.2 ft Easting: 3,227,228.62 ft Longitude: 104° 41' 4.668 W
Position Uncertainty 0.0 ft Wellhead Elevation: ft Ground Level: 4,668.0 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/29/2009	8.98	67.09	53,292

Design Noble Dickens F32-28D Plan #1 (12-29-09)

Audit Notes:

Version: Phase: PROTOTYPE Tie On Depth: 0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	341.44

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,668.0	25.36	325.00	1,627.0	226.1	-158.3	2.00	2.00	0.00	325.00	
1,748.8	25.36	325.00	1,700.0	254.5	-178.2	0.00	0.00	0.00	0.00	
2,179.7	25.36	345.21	2,090.2	419.6	-254.8	2.00	0.00	4.69	99.17	
5,370.1	25.36	345.21	4,973.1	1,740.6	-603.6	0.00	0.00	0.00	0.00	
6,637.9	0.00	344.69	6,200.0	2,007.5	-674.0	2.00	-2.00	0.00	180.00	TARGET BHL 75'FI
7,668.9	0.00	344.69	7,231.0	2,007.5	-674.0	0.00	0.00	0.00	344.69	

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.32-T5N-R65W
Site: Dickens F32-27D Pad Sec.32-T5N-R65W
Well: Dickens F32-28D
Wellbore: Wellbore #1
Design: Noble Dickens F32-28D Plan #1 (12-29-09)

Local Co-ordinate Reference: Well Dickens F32-28D
TVD Reference: WELL @ 4681.0ft (Original Well Elev)
MD Reference: WELL @ 4681.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
440.0	0.80	325.00	440.0	0.2	-0.2	0.3	2.00	2.00	0.00
480.0	1.60	325.00	480.0	0.9	-0.6	1.1	2.00	2.00	0.00
520.0	2.40	325.00	520.0	2.1	-1.4	2.4	2.00	2.00	0.00
560.0	3.20	325.00	559.9	3.7	-2.6	4.3	2.00	2.00	0.00
600.0	4.00	325.00	599.8	5.7	-4.0	6.7	2.00	2.00	0.00
640.0	4.80	325.00	639.7	8.2	-5.8	9.6	2.00	2.00	0.00
680.0	5.60	325.00	679.6	11.2	-7.8	13.1	2.00	2.00	0.00
720.0	6.40	325.00	719.3	14.6	-10.2	17.1	2.00	2.00	0.00
760.0	7.20	325.00	759.1	18.5	-13.0	21.7	2.00	2.00	0.00
800.0	8.00	325.00	798.7	22.8	-16.0	26.7	2.00	2.00	0.00
840.0	8.80	325.00	838.3	27.6	-19.3	32.3	2.00	2.00	0.00
880.0	9.60	325.00	877.8	32.9	-23.0	38.5	2.00	2.00	0.00
920.0	10.40	325.00	917.1	38.6	-27.0	45.1	2.00	2.00	0.00
960.0	11.20	325.00	956.4	44.7	-31.3	52.3	2.00	2.00	0.00
1,000.0	12.00	325.00	995.6	51.3	-35.9	60.0	2.00	2.00	0.00
1,040.0	12.80	325.00	1,034.7	58.3	-40.8	68.3	2.00	2.00	0.00
1,080.0	13.60	325.00	1,073.6	65.8	-46.1	77.0	2.00	2.00	0.00
1,120.0	14.40	325.00	1,112.4	73.7	-51.6	86.3	2.00	2.00	0.00
1,160.0	15.20	325.00	1,151.1	82.1	-57.5	96.1	2.00	2.00	0.00
1,200.0	16.00	325.00	1,189.6	90.9	-63.7	106.4	2.00	2.00	0.00
1,240.0	16.80	325.00	1,228.0	100.2	-70.1	117.3	2.00	2.00	0.00
1,280.0	17.60	325.00	1,266.2	109.8	-76.9	128.6	2.00	2.00	0.00
1,320.0	18.40	325.00	1,304.3	120.0	-84.0	140.5	2.00	2.00	0.00
1,360.0	19.20	325.00	1,342.1	130.5	-91.4	152.8	2.00	2.00	0.00
1,400.0	20.00	325.00	1,379.8	141.5	-99.1	165.7	2.00	2.00	0.00
1,440.0	20.80	325.00	1,417.3	152.9	-107.1	179.1	2.00	2.00	0.00
1,480.0	21.60	325.00	1,454.6	164.8	-115.4	193.0	2.00	2.00	0.00
1,520.0	22.40	325.00	1,491.7	177.1	-124.0	207.3	2.00	2.00	0.00
1,560.0	23.20	325.00	1,528.6	189.8	-132.9	222.2	2.00	2.00	0.00
1,600.0	24.00	325.00	1,565.2	202.9	-142.1	237.5	2.00	2.00	0.00
1,640.0	24.80	325.00	1,601.6	216.4	-151.5	253.4	2.00	2.00	0.00
1,668.0	25.36	325.00	1,627.0	226.1	-158.3	264.8	2.00	2.00	0.00
1,680.0	25.36	325.00	1,637.8	230.4	-161.3	269.7	0.00	0.00	0.00
1,720.0	25.36	325.00	1,674.0	244.4	-171.1	286.1	0.00	0.00	0.00
1,748.8	25.36	325.00	1,700.0	254.5	-178.2	298.0	0.00	0.00	0.00
1,760.0	25.33	325.52	1,710.1	258.4	-180.9	302.6	2.00	-0.31	4.62
1,800.0	25.22	327.37	1,746.3	272.7	-190.4	319.1	2.00	-0.27	4.64
1,840.0	25.13	329.24	1,782.5	287.1	-199.3	335.6	2.00	-0.22	4.67
1,880.0	25.07	331.12	1,818.7	301.9	-207.7	352.3	2.00	-0.16	4.70
1,920.0	25.03	333.01	1,855.0	316.8	-215.7	369.0	2.00	-0.10	4.72
1,960.0	25.01	334.90	1,891.2	332.0	-223.1	385.8	2.00	-0.04	4.73
2,000.0	25.02	336.79	1,927.5	347.4	-230.0	402.6	2.00	0.02	4.73
2,040.0	25.06	338.68	1,963.7	363.1	-236.4	419.5	2.00	0.08	4.72

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.32-T5N-R65W
Site: Dickens F32-27D Pad Sec.32-T5N-R65W
Well: Dickens F32-28D
Wellbore: Wellbore #1
Design: Noble Dickens F32-28D Plan #1 (12-29-09)

Local Co-ordinate Reference: Well Dickens F32-28D
TVD Reference: WELL @ 4681.0ft (Original Well Elev)
MD Reference: WELL @ 4681.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
2,080.0	25.11	340.57	1,999.9	379.0	-242.3	436.4	2.00	0.14	4.71
2,120.0	25.19	342.44	2,036.1	395.1	-247.7	453.4	2.00	0.20	4.68
2,160.0	25.30	344.30	2,072.3	411.5	-252.6	470.5	2.00	0.26	4.65
2,179.7	25.36	345.21	2,090.2	419.6	-254.8	478.9	2.00	0.30	4.62
2,200.0	25.36	345.21	2,108.5	428.0	-257.0	487.6	0.00	0.00	0.00
2,240.0	25.36	345.21	2,144.6	444.6	-261.4	504.7	0.00	0.00	0.00
2,280.0	25.36	345.21	2,180.8	461.1	-265.8	521.7	0.00	0.00	0.00
2,320.0	25.36	345.21	2,216.9	477.7	-270.2	538.8	0.00	0.00	0.00
2,360.0	25.36	345.21	2,253.1	494.3	-274.5	555.9	0.00	0.00	0.00
2,400.0	25.36	345.21	2,289.2	510.8	-278.9	573.0	0.00	0.00	0.00
2,440.0	25.36	345.21	2,325.4	527.4	-283.3	590.1	0.00	0.00	0.00
2,480.0	25.36	345.21	2,361.5	543.9	-287.6	607.2	0.00	0.00	0.00
2,520.0	25.36	345.21	2,397.6	560.5	-292.0	624.3	0.00	0.00	0.00
2,560.0	25.36	345.21	2,433.8	577.1	-296.4	641.4	0.00	0.00	0.00
2,600.0	25.36	345.21	2,469.9	593.6	-300.8	658.5	0.00	0.00	0.00
2,640.0	25.36	345.21	2,506.1	610.2	-305.1	675.6	0.00	0.00	0.00
2,680.0	25.36	345.21	2,542.2	626.8	-309.5	692.7	0.00	0.00	0.00
2,720.0	25.36	345.21	2,578.4	643.3	-313.9	709.8	0.00	0.00	0.00
2,760.0	25.36	345.21	2,614.5	659.9	-318.3	726.9	0.00	0.00	0.00
2,800.0	25.36	345.21	2,650.7	676.4	-322.6	744.0	0.00	0.00	0.00
2,840.0	25.36	345.21	2,686.8	693.0	-327.0	761.1	0.00	0.00	0.00
2,880.0	25.36	345.21	2,723.0	709.6	-331.4	778.1	0.00	0.00	0.00
2,920.0	25.36	345.21	2,759.1	726.1	-335.7	795.2	0.00	0.00	0.00
2,960.0	25.36	345.21	2,795.3	742.7	-340.1	812.3	0.00	0.00	0.00
3,000.0	25.36	345.21	2,831.4	759.3	-344.5	829.4	0.00	0.00	0.00
3,040.0	25.36	345.21	2,867.6	775.8	-348.9	846.5	0.00	0.00	0.00
3,080.0	25.36	345.21	2,903.7	792.4	-353.2	863.6	0.00	0.00	0.00
3,120.0	25.36	345.21	2,939.8	808.9	-357.6	880.7	0.00	0.00	0.00
3,160.0	25.36	345.21	2,976.0	825.5	-362.0	897.8	0.00	0.00	0.00
3,200.0	25.36	345.21	3,012.1	842.1	-366.4	914.9	0.00	0.00	0.00
3,240.0	25.36	345.21	3,048.3	858.6	-370.7	932.0	0.00	0.00	0.00
3,280.0	25.36	345.21	3,084.4	875.2	-375.1	949.1	0.00	0.00	0.00
3,320.0	25.36	345.21	3,120.6	891.8	-379.5	966.2	0.00	0.00	0.00
3,360.0	25.36	345.21	3,156.7	908.3	-383.8	983.3	0.00	0.00	0.00
3,400.0	25.36	345.21	3,192.9	924.9	-388.2	1,000.4	0.00	0.00	0.00
3,440.0	25.36	345.21	3,229.0	941.4	-392.6	1,017.4	0.00	0.00	0.00
3,480.0	25.36	345.21	3,265.2	958.0	-397.0	1,034.5	0.00	0.00	0.00
3,520.0	25.36	345.21	3,301.3	974.6	-401.3	1,051.6	0.00	0.00	0.00
3,560.0	25.36	345.21	3,337.5	991.1	-405.7	1,068.7	0.00	0.00	0.00
3,600.0	25.36	345.21	3,373.6	1,007.7	-410.1	1,085.8	0.00	0.00	0.00
3,640.0	25.36	345.21	3,409.7	1,024.3	-414.5	1,102.9	0.00	0.00	0.00
3,680.0	25.36	345.21	3,445.9	1,040.8	-418.8	1,120.0	0.00	0.00	0.00
3,720.0	25.36	345.21	3,482.0	1,057.4	-423.2	1,137.1	0.00	0.00	0.00
3,760.0	25.36	345.21	3,518.2	1,074.0	-427.6	1,154.2	0.00	0.00	0.00
3,800.0	25.36	345.21	3,554.3	1,090.5	-431.9	1,171.3	0.00	0.00	0.00
3,840.0	25.36	345.21	3,590.5	1,107.1	-436.3	1,188.4	0.00	0.00	0.00
3,880.0	25.36	345.21	3,626.6	1,123.6	-440.7	1,205.5	0.00	0.00	0.00
3,920.0	25.36	345.21	3,662.8	1,140.2	-445.1	1,222.6	0.00	0.00	0.00
3,960.0	25.36	345.21	3,698.9	1,156.8	-449.4	1,239.7	0.00	0.00	0.00
4,000.0	25.36	345.21	3,735.1	1,173.3	-453.8	1,256.7	0.00	0.00	0.00
4,040.0	25.36	345.21	3,771.2	1,189.9	-458.2	1,273.8	0.00	0.00	0.00
4,080.0	25.36	345.21	3,807.4	1,206.5	-462.6	1,290.9	0.00	0.00	0.00
4,120.0	25.36	345.21	3,843.5	1,223.0	-466.9	1,308.0	0.00	0.00	0.00
4,160.0	25.36	345.21	3,879.6	1,239.6	-471.3	1,325.1	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Dickens F32-28D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4681.0ft (Original Well Elev)
Project:	SEC.32-T5N-R65W	MD Reference:	WELL @ 4681.0ft (Original Well Elev)
Site:	Dickens F32-27D Pad Sec.32-T5N-R65W	North Reference:	True
Well:	Dickens F32-28D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Dickens F32-28D Plan #1 (12-29-09)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,200.0	25.36	345.21	3,915.8	1,256.1	-475.7	1,342.2	0.00	0.00	0.00
4,240.0	25.36	345.21	3,951.9	1,272.7	-480.0	1,359.3	0.00	0.00	0.00
4,280.0	25.36	345.21	3,988.1	1,289.3	-484.4	1,376.4	0.00	0.00	0.00
4,320.0	25.36	345.21	4,024.2	1,305.8	-488.8	1,393.5	0.00	0.00	0.00
4,360.0	25.36	345.21	4,060.4	1,322.4	-493.2	1,410.6	0.00	0.00	0.00
4,400.0	25.36	345.21	4,096.5	1,339.0	-497.5	1,427.7	0.00	0.00	0.00
4,440.0	25.36	345.21	4,132.7	1,355.5	-501.9	1,444.8	0.00	0.00	0.00
4,480.0	25.36	345.21	4,168.8	1,372.1	-506.3	1,461.9	0.00	0.00	0.00
4,520.0	25.36	345.21	4,205.0	1,388.6	-510.7	1,479.0	0.00	0.00	0.00
4,560.0	25.36	345.21	4,241.1	1,405.2	-515.0	1,496.1	0.00	0.00	0.00
4,600.0	25.36	345.21	4,277.3	1,421.8	-519.4	1,513.1	0.00	0.00	0.00
4,640.0	25.36	345.21	4,313.4	1,438.3	-523.8	1,530.2	0.00	0.00	0.00
4,680.0	25.36	345.21	4,349.5	1,454.9	-528.1	1,547.3	0.00	0.00	0.00
4,720.0	25.36	345.21	4,385.7	1,471.5	-532.5	1,564.4	0.00	0.00	0.00
4,760.0	25.36	345.21	4,421.8	1,488.0	-536.9	1,581.5	0.00	0.00	0.00
4,800.0	25.36	345.21	4,458.0	1,504.6	-541.3	1,598.6	0.00	0.00	0.00
4,840.0	25.36	345.21	4,494.1	1,521.1	-545.6	1,615.7	0.00	0.00	0.00
4,880.0	25.36	345.21	4,530.3	1,537.7	-550.0	1,632.8	0.00	0.00	0.00
4,920.0	25.36	345.21	4,566.4	1,554.3	-554.4	1,649.9	0.00	0.00	0.00
4,960.0	25.36	345.21	4,602.6	1,570.8	-558.8	1,667.0	0.00	0.00	0.00
5,000.0	25.36	345.21	4,638.7	1,587.4	-563.1	1,684.1	0.00	0.00	0.00
5,040.0	25.36	345.21	4,674.9	1,604.0	-567.5	1,701.2	0.00	0.00	0.00
5,080.0	25.36	345.21	4,711.0	1,620.5	-571.9	1,718.3	0.00	0.00	0.00
5,120.0	25.36	345.21	4,747.2	1,637.1	-576.2	1,735.4	0.00	0.00	0.00
5,160.0	25.36	345.21	4,783.3	1,653.6	-580.6	1,752.4	0.00	0.00	0.00
5,200.0	25.36	345.21	4,819.5	1,670.2	-585.0	1,769.5	0.00	0.00	0.00
5,240.0	25.36	345.21	4,855.6	1,686.8	-589.4	1,786.6	0.00	0.00	0.00
5,280.0	25.36	345.21	4,891.7	1,703.3	-593.7	1,803.7	0.00	0.00	0.00
5,320.0	25.36	345.21	4,927.9	1,719.9	-598.1	1,820.8	0.00	0.00	0.00
5,360.0	25.36	345.21	4,964.0	1,736.5	-602.5	1,837.9	0.00	0.00	0.00
5,370.1	25.36	345.21	4,973.1	1,740.6	-603.6	1,842.2	0.00	0.00	0.00
5,400.0	24.76	345.21	5,000.3	1,752.9	-606.8	1,854.9	2.00	-2.00	0.00
5,440.0	23.96	345.21	5,036.7	1,768.8	-611.0	1,871.3	2.00	-2.00	0.00
5,480.0	23.16	345.21	5,073.4	1,784.3	-615.1	1,887.3	2.00	-2.00	0.00
5,520.0	22.36	345.21	5,110.2	1,799.3	-619.1	1,902.7	2.00	-2.00	0.00
5,560.0	21.56	345.21	5,147.3	1,813.7	-622.9	1,917.6	2.00	-2.00	0.00
5,600.0	20.76	345.21	5,184.6	1,827.7	-626.6	1,932.1	2.00	-2.00	0.00
5,640.0	19.96	345.21	5,222.1	1,841.1	-630.1	1,945.9	2.00	-2.00	0.00
5,680.0	19.16	345.21	5,259.8	1,854.1	-633.5	1,959.3	2.00	-2.00	0.00
5,720.0	18.36	345.21	5,297.7	1,866.5	-636.8	1,972.1	2.00	-2.00	0.00
5,760.0	17.56	345.21	5,335.8	1,878.4	-640.0	1,984.4	2.00	-2.00	0.00
5,800.0	16.76	345.21	5,374.0	1,889.8	-643.0	1,996.2	2.00	-2.00	0.00
5,840.0	15.96	345.21	5,412.4	1,900.7	-645.9	2,007.5	2.00	-2.00	0.00
5,880.0	15.16	345.21	5,450.9	1,911.1	-648.6	2,018.2	2.00	-2.00	0.00
5,920.0	14.36	345.21	5,489.6	1,921.0	-651.2	2,028.3	2.00	-2.00	0.00
5,960.0	13.56	345.21	5,528.4	1,930.3	-653.7	2,038.0	2.00	-2.00	0.00
6,000.0	12.76	345.21	5,567.3	1,939.1	-656.0	2,047.0	2.00	-2.00	0.00
6,040.0	11.96	345.21	5,606.4	1,947.4	-658.2	2,055.6	2.00	-2.00	0.00
6,080.0	11.16	345.21	5,645.6	1,955.1	-660.2	2,063.6	2.00	-2.00	0.00
6,120.0	10.36	345.21	5,684.9	1,962.3	-662.1	2,071.0	2.00	-2.00	0.00
6,160.0	9.56	345.21	5,724.3	1,969.0	-663.9	2,077.9	2.00	-2.00	0.00
6,200.0	8.76	345.21	5,763.8	1,975.2	-665.5	2,084.3	2.00	-2.00	0.00
6,240.0	7.96	345.21	5,803.4	1,980.8	-667.0	2,090.1	2.00	-2.00	0.00
6,280.0	7.16	345.21	5,843.0	1,985.9	-668.3	2,095.3	2.00	-2.00	0.00

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.32-T5N-R65W
Site: Dickens F32-27D Pad Sec.32-T5N-R65W
Well: Dickens F32-28D
Wellbore: Wellbore #1
Design: Noble Dickens F32-28D Plan #1 (12-29-09)

Local Co-ordinate Reference: Well Dickens F32-28D
TVD Reference: WELL @ 4681.0ft (Original Well Elev)
MD Reference: WELL @ 4681.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,320.0	6.36	345.21	5,882.7	1,990.4	-669.5	2,100.0	2.00	-2.00	0.00
6,360.0	5.56	345.21	5,922.5	1,994.5	-670.6	2,104.2	2.00	-2.00	0.00
6,400.0	4.76	345.21	5,962.4	1,997.9	-671.5	2,107.8	2.00	-2.00	0.00
6,440.0	3.96	345.21	6,002.2	2,000.9	-672.3	2,110.8	2.00	-2.00	0.00
6,480.0	3.16	345.21	6,042.2	2,003.3	-672.9	2,113.3	2.00	-2.00	0.00
6,520.0	2.36	345.21	6,082.1	2,005.1	-673.4	2,115.2	2.00	-2.00	0.00
6,560.0	1.56	345.21	6,122.1	2,006.5	-673.8	2,116.6	2.00	-2.00	0.00
6,600.0	0.76	345.21	6,162.1	2,007.2	-674.0	2,117.4	2.00	-2.00	0.00
6,637.9	0.00	344.69	6,200.0	2,007.5	-674.0	2,117.6	2.00	-2.00	0.00
TARGET BHL 75°FNL, 2561°FEL									
6,640.0	0.00	344.69	6,202.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
6,680.0	0.00	344.69	6,242.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
6,720.0	0.00	344.69	6,282.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
6,760.0	0.00	344.69	6,322.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
6,800.0	0.00	344.69	6,362.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
6,840.0	0.00	344.69	6,402.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
6,880.0	0.00	344.69	6,442.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
6,920.0	0.00	344.69	6,482.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
6,960.0	0.00	344.69	6,522.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
7,000.0	0.00	344.69	6,562.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
7,040.0	0.00	344.69	6,602.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
7,080.0	0.00	344.69	6,642.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
7,120.0	0.00	344.69	6,682.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
7,160.0	0.00	344.69	6,722.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
7,200.0	0.00	344.69	6,762.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
7,218.9	0.00	344.69	6,781.0	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
NIORARA - TARGET CIRCLE 75°FNL, 2561°FEL									
7,240.0	0.00	344.69	6,802.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
7,280.0	0.00	344.69	6,842.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
7,320.0	0.00	344.69	6,882.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
7,360.0	0.00	344.69	6,922.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
7,400.0	0.00	344.69	6,962.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
7,440.0	0.00	344.69	7,002.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
7,480.0	0.00	344.69	7,042.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
7,518.9	0.00	344.69	7,081.0	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
CODELL									
7,520.0	0.00	344.69	7,082.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
7,560.0	0.00	344.69	7,122.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
7,600.0	0.00	344.69	7,162.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
7,640.0	0.00	344.69	7,202.1	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
7,668.9	0.00	344.69	7,231.0	2,007.5	-674.0	2,117.6	0.00	0.00	0.00
HARDLINES 75°N & W OF BHL									

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Dickens F32-28D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4681.0ft (Original Well Elev)
Project:	SEC.32-T5N-R65W	MD Reference:	WELL @ 4681.0ft (Original Well Elev)
Site:	Dickens F32-27D Pad Sec.32-T5N-R65W	North Reference:	True
Well:	Dickens F32-28D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Dickens F32-28D Plan #1 (12-29-09)		

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
TARGET CIRCLE 75'	0.00	0.00	6,781.0	2,007.5	-674.0	1,376,072.66	3,226,536.22	40° 21' 46.333 N	104° 41' 13.375 W
- plan hits target center									
- Circle (radius 75.0)									
TARGET BHL 75'FNL	0.00	0.00	6,200.0	2,007.5	-674.0	1,376,072.64	3,226,536.19	40° 21' 46.333 N	104° 41' 13.375 W
- plan hits target center									
- Point									
HARDLINES 75'N & V	0.00	0.00	7,231.0	2,082.5	-749.0	1,376,146.96	3,226,460.54	40° 21' 47.074 N	104° 41' 14.344 W
- plan misses target center by 106.1ft at 7668.9ft MD (7231.0 TVD, 2007.5 N, -674.0 E)									
- Polygon									
Point 1			7,231.0	0.0	0.0	1,376,146.96	3,226,460.54		
Point 2			7,231.0	0.0	200.0	1,376,148.80	3,226,660.52		
Point 3			7,231.0	0.0	0.0	1,376,146.96	3,226,460.54		
Point 4			7,231.0	-200.0	0.0	1,375,946.98	3,226,462.37		

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(ft)	(ft)			(°)	(°)
7,218.9	6,781.0	NIOBRARA		0.00	
7,518.9	7,081.0	CODELL		0.00	